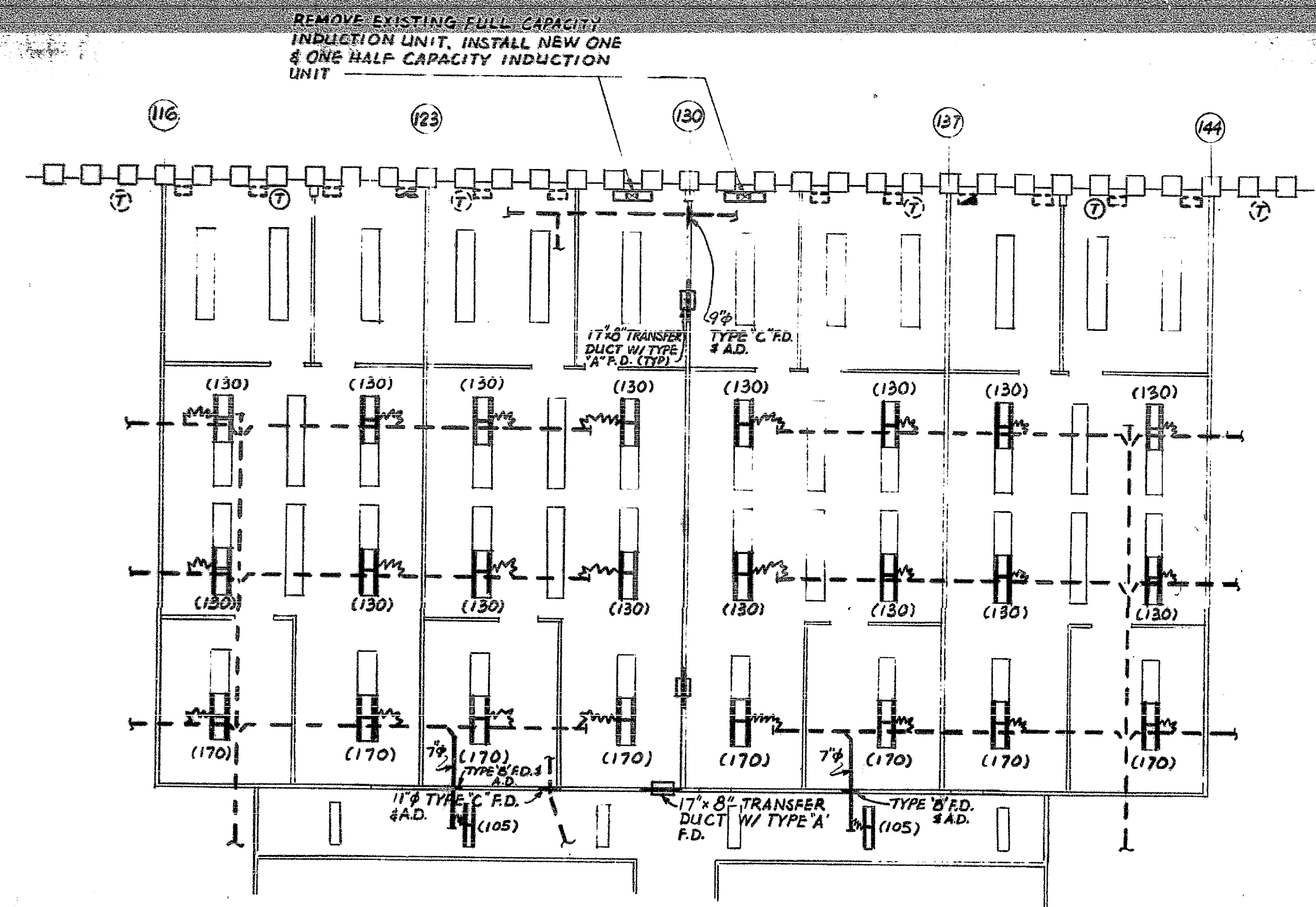
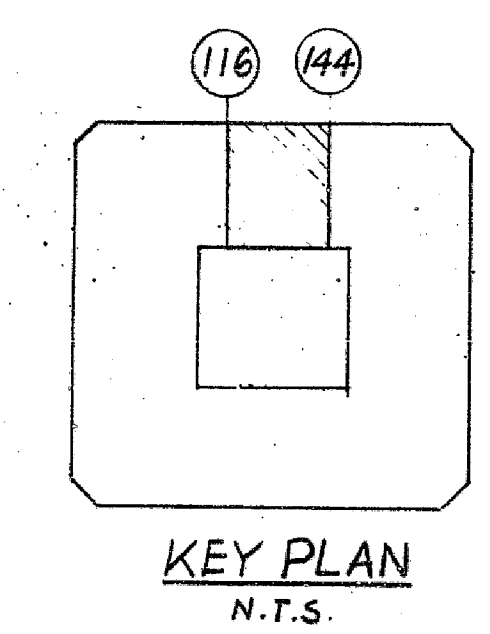
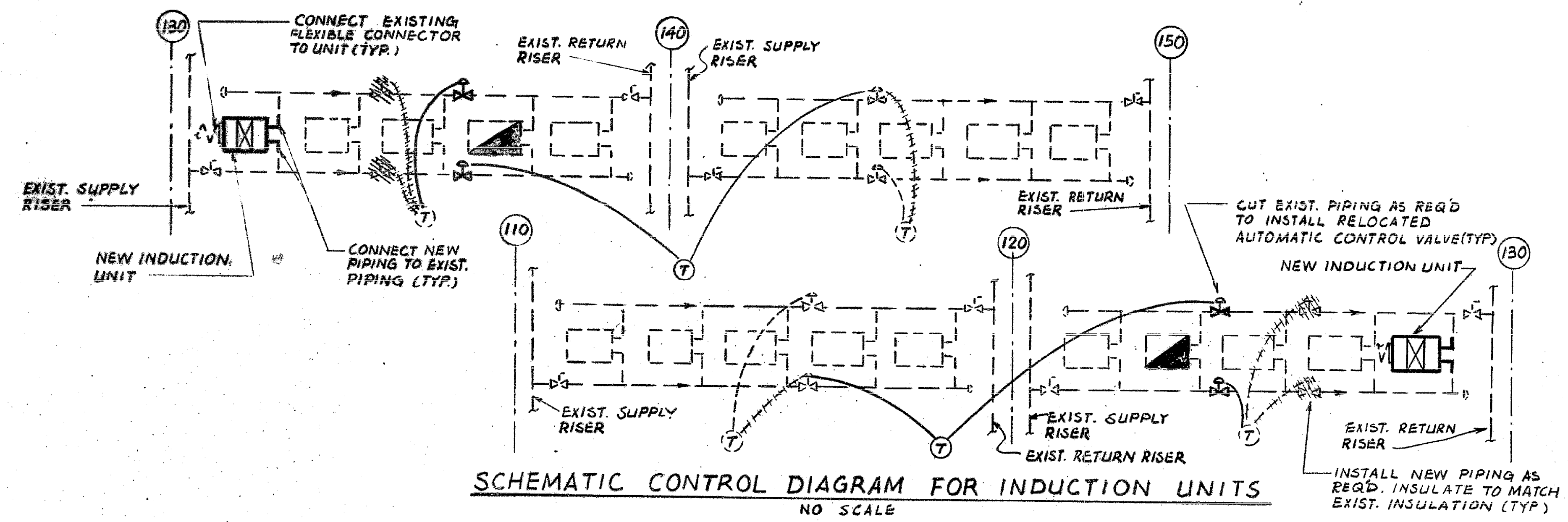


A-98 116-144
 PRE-BUILT UNITS 576.902
 M-1



LEGEND

- NEW DOUBLE POUCH
- EXISTING DUCTWORK
- NEW FLEXIBLE CONNECTOR
- EXISTING FULL CAPACITY INDUCTION UNIT
- (000) NO. OF C.F.M. (BALANCE)
- NEW THERMOSTAT
- NEW INDUCTION UNIT AT ONE AND ONE-HALF CAPACITY
- EXISTING FULL CAPACITY INDUCTION UNIT ADJUST TO HALF CAPACITY
- EXISTING THERMOSTAT
- EXIST. AUTOMATIC CONTROL VALVE TO REMAIN
- EXIST. AUTOMATIC CONTROL VALVE TO REMOVE & RELOCATE
- RELOCATED AUTOMATIC CONTROL VALVE
- EXIST. CONTROL TUBING OR PIPING
- EXIST. CONTROL TUBING TO BE REMOVED
- NEW CONTROL TUBING
- EXISTING BALANCING VALVE



REQUIREMENTS

All mechanical work shall be free from defects in workmanship and materials for a period of one (1) year from date of final acceptance and shall meet all local and state codes. All defects, which develop or are discovered within this period shall be repaired by the Contractor to the satisfaction of the Engineer and at no additional cost to the Authority.

GENERAL

- The Contractor shall examine the site of the proposed work to determine the existing conditions that may affect his work.
- It is the intention of the Contract Drawings and Specifications to call for finished work, tested and ready for operation. All materials shall be new and of first-quality.
- All material, work, incidental accessories or other details not shown but necessary to make the work complete and perfect, and in all respects ready for operation, even if not particularly specified, shall be provided by the Contractor at no additional cost to the Authority.
- The Contract Drawings are generally diagrammatic and are intended to convey the scope of work and indicate general arrangement of ductwork and pouches, and induction units.
- If any existing ducts, pipes, utilities, etc., are damaged during the installation, whether or not due to the Contractor's negligence they shall be repaired or replaced by the Contractor and left in a condition satisfactory to the Engineer.
- Coordinate locations of all pouches with architectural reflected ceiling plans.
- The space around pipes, ducts, etc. penetrating rated walls, shall not exceed 1/2" and shall be packed solid with mineral wool or equivalent. Perimeter shall be closed off by tight fitting metal escutcheons on both sides of this construction as required by Sections C26-504.5 of N.Y.C. Building Code.

MATERIALS FURNISHED BY THE AUTHORITY

The Authority shall furnish to the Contractor the materials in the quantities as shown below for installation in the permanent construction.

- Light fixture air pouches: TWENTY-FOUR
- Round flexible duct for connection to pouch: TWENTY-FOUR
- Induction Units: TWO (ONE AND ONE-HALF CAPACITY)

DUCTWORK

- All ductwork shall be provided and installed in accordance with the latest edition of the SMACNA Low Velocity Duct Construction Standards Manual, using prime sheets of galvanized steel. All square elbows shall be provided with turning vanes on maximum 4" centers. Provide access doors at all fire and automatic dampers for access.
- All branches and take-offs shall be equipped with volume controllers.
- Support horizontal ducts with hangers secured to structural steel above at intervals not exceeding 8'.
- Connections to collars on the supply duct and the diffuser plenum of ceiling pouches shall be sealed with 3M Co. 800 sealant and clamped with Stainless Steel Ideal Type 52 clamps.
- All access doors shall be as per latest SMACNA Standards.

INDUCTION UNIT

- Install where shown on the drawing (furnished by P.A.), a factory assembled high pressure air-water induction type, summer winter room air conditioning unit, properly connected to primary air conduit and water piping. Induction unit shall be as manufactured by Carrier for the World Trade Center Model #36SL60R-R-3 Type 71. The unit shall deliver 75 cfm with a cooling capacity of 5600 BTU and heating capacity of 7560 BTU.
- Support and fasten unit to prevent all vibration, providing all required wall brackets supporting legs and leveling devices. Unit support method shall be subject to the approval of the Engineer and be similar to the method used for the existing unit.
- The Contractor shall adjust induction unit performance as shown on the drawing.
- Existing induction unit to be removed shall be done in a manner so as not to damage the unit. The unit shall be labeled, identifying the area it was removed from (building, floor, exposure and column number) and returned to the Port Authority in an area designated by the Engineer.
- The air connection to the induction unit shall be made with "Thermoflex" Type S-FL as manufactured by Autotek Industries or approved equal, of sizes shown, but not less than the full unit inlet size. The connections shall be sealed with Minnesota Mining & Mfg. Co. 800 sealant and clamped with Ideal Type 52 hose clamps, or approved equal. Flexible connections that penetrate any rated closures shall be installed as specified.
- The new piping connected to the relocated induction unit shall be Copper ASTM B-88, soft (annealed) Type L and fittings shall be standard weight, wrought copper and solder type. All soldered joints shall be made with 50% tin and 50% lead solder, having a melting point of not less than 360°F. All soldered joints shall be thoroughly cleaned before the application of the solder. All insulation shall match existing.

FIRE DAMPERS

Fire dampers are based on Air Balance, Model #119 Type A, etc. They shall be installed in accordance with the manufacturer's approved installation instructions and shall be N.Y.C. Board of Standards and Appeals (B.S.A.), Underwriters Laboratories (U.L.) approved and labeled.

BALANCING

All systems shall be balanced in accordance with the latest standards of the "Associated Air Balance Council" and subject to the approval of the Engineer.

SUBMITTALS

Submit for approval three (3) sets of shop drawings of details of fire damper installations. Submit three (3) sets of catalog cuts of fire dampers, and air balancing data report.

NOTE:

FOR FIRE DAMPER & TRANSFER DUCT DETAILS
SEE DRAWING NO. M-2

RELEASED FOR BIDDING	
BY <i>[Signature]</i>	DATE 7-2-79
PLEASE SEE SECTION 5114.29	
MANAGER, WTC DIVISION	

THIS DRAWING SUBJECT TO CONDITIONS IN CONTRACT DOCUMENTS. IDEAS, DESIGNS AND METHODS HEREIN ARE RESERVED TO PORT AUTHORITY AND MAY NOT BE USED WITHOUT ITS WRITTEN CONSENT.

D.T. DESIGNED	REVISIONS					
	NO.	DATE	APPD.	DESCRIPTION	NO.	DATE
D.T. DRAWN						
H.A. CHECKED						
A.D. IN CHARGE						

[Signature]
CHIEF ENGINEER

[Signature]
CHIEF MECHANICAL ENGINEER

[Signature]
ENGINEER OF DESIGN
(AIRPORTS & WTC)
3/23/79
DATE

THE PORT AUTHORITY OF NY & NJ
THE WORLD TRADE CENTER
TOWER 'A' 9-8TH FLOOR
PRE-BUILT UNITS

MECHANICAL
PLAN, LEGEND,
SCHEMATIC DIAGRAM & SPECIFICATIONS
CONTRACT NO. WTC 576.902
DRAWING NO. M-1